

Remarks

Claims 1, 3, 4, and 6-14 are pending for the Examiner's consideration, including amended claims 1, 3, 4, 6, and 9. Claims 2 and 5 have been canceled.

No new matter is believed to have been added by the amendments presented herein to the claims, specification, and drawing.

In the Office Action, the drawing was objected to because the single figure was labeled "Fig. 1." In response, the label of Fig. 1 has been removed from this sole figure. Annotated and replacement sheets are submitted herewith. The specification also has been amended accordingly.

In addition, the specification has been amended on page 3, after line 15, to include a "List of Designations." Support for this amendment and list of designations can be found in priority International Patent Application PCT/IB02/04068 at pages 4-5, which was incorporated in the present application by reference, as well as in the priority Swiss Patent Application No. 2001 1909/01 at pages 4-5. No new matter is believed to have been added.

Claims 9-13 were rejected in the Office Action under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 2,549,819 to Kane. ("Kane"). The rejection respectfully is overcome.

Kane is directed to an axial flow compressor cooling system. Nozzles **21** are distributed about the periphery of the casing **11**. (Col. 3, lines 49-50). Cooling liquid is injected into the compressor as a fine spray. (Col. 4, lines 1-3). A nozzle as disclosed in Kane has a deflector **25**, shown in FIG. 5, which receives the impact of cooling liquid thus forming a fine spray which enters the compressor. (Col. 4, lines 3-11). Diffusion occurs by impact with the high velocity air passing around the blade, forming a fine spray. (Col. 4, lines 30-31).

As understood, Kane is silent with respect to means provided on the stator for introducing water into a boundary flow of the airflow disposed at an inner wall of the stator, said means being configured to introduce the water into the axial compressor so that the water forms a thin film on the inner wall of the stator, as recited in independent claim 9. The cooling liquid injection disclosed in Kane and accomplished with the deflector arrangement of the nozzle of FIG. 5 does not provide the restriction in location of water as recited in claim 9.

Claims 1-8 were rejected in the Office Action under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 3,632,223 to Hampton in view of Kane. In addition, claim 14 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Kane in view of Hampton. The rejections respectfully are overcome.

In independent claims 1 and 4, as amended, the water is introduced into the axial compressor so that the water forms a thin film on the inner wall of the stator.

Hampton is directed to a turbine engine having a multistage compressor with an interstaged bleed air system. As understood, Hampton is completely silent with respect to the cooling provided by the inventions of claims 1 and 4. For example, Hampton is unrelated to water cooling of a boundary flow of an airflow, and moreover is unrelated to a method in which water forms a thin water film on the inner wall of the stator. There is no suggestion or motivation to combine Hampton and Kane to arrive at the inventions of claims 1 and 4 and neither reference provides that the water is introduced into the axial compressor so that the water forms a thin water film on the inner wall of the stator

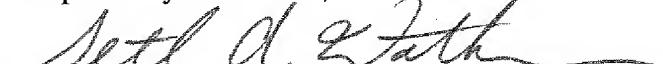
With respect to dependent claim 3 which depends from independent claim 1, dependent claims 6-8 which depend from independent claim 4, and dependent claims 10-14 which depend from independent claim 9, it is submitted that these claims at least are patentable not only because of the patentability of the independent claim from which they depend, but also for the totality of features recited respectively therein.

In view of the foregoing, it is believed that all the pending claims are in condition for allowance, which is respectfully requested. If the Examiner does not agree, then a personal or telephonic interview is respectfully requested to discuss any remaining issues so as to expedite the eventual allowance of the claims.

A Petition for Extension of Time also is submitted concurrently herewith. Should any additional fees be required, please charge such fees to Steptoe & Johnson LLP Deposit Account No. 19-4293.

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Respectfully Submitted,


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Attachments